

Comparisons of Job Characteristics

Focus Occupation: **Mathematicians (15-2021)**

Associated Occupation: **Mathematical Technicians (15-2091)**

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 96

Focus Occupation: Mathematicians (15-2021)

Associated Occupation: Mathematical Technicians (15-2091)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Mathematics	9.2	22.0	25.0	>> Current knowledge level is likely more than sufficient
Computers and Electronics	8.4	14.4	17.2	> Current knowledge level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 80

Focus Occupation: Mathematicians (15-2021)

Associated Occupation: Mathematical Technicians (15-2091)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Mathematics	6.2	20.5	23.2	> Skill level is likely sufficient
Critical Thinking	10.8	18.0	16.0	< A higher skill level may be required
Reading Comprehension	10.7	16.4	16.3	0 Current skill level may be sufficient
Active Listening	11.0	15.8	12.0	<< Extensive development of skills in this area may be required
Judgment and Decision Making	9.4	15.0	10.4	<< Extensive development of skills in this area may be required
Active Learning	8.7	14.3	16.4	> Skill level is likely sufficient
Equipment Selection	3.3	13.6	1.0	<< Extensive development of skills in this area may be required
Complex Problem Solving	9.1	13.3	15.1	> Skill level is likely sufficient
Science	4.5	13.0	13.0	0 Current skill level may be sufficient
Operations Analysis	5.0	10.1	6.6	<< Extensive development of skills in this area may be required

Programming	2.2	9.5	6.2	<<	Extensive development of skills in this area may be required
Technology Design	2.6	5.1	1.7	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 82			
Focus Occupation: Mathematicians (15-2021) Associated Occupation: Mathematical Technicians (15-2091)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Mathematical Reasoning	6.3	23.0	20.6	<	Some improvement in abilities may be required
Number Facility	6.3	21.8	15.5	<<	Extensive improvement in abilities may be required
Deductive Reasoning	10.6	15.5	15.7	0	Current ability level may be sufficient
Oral Expression	12.4	12.4	13.0	0	Current ability level may be sufficient
Oral Comprehension	12.5	12.0	15.4	>>	Current ability level is likely more than sufficient
Problem Sensitivity	11.1	9.1	11.1	>	Current ability level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 98
Focus Occupation: Mathematicians (15-2021) Associated Occupation: Mathematical Technicians (15-2091)		
Work Activities	Exclusivity of Activity	
Analyze scientific research data or investigative findings	27	
Collect scientific or technical data	30	
Communicate technical information	4	
Compile numerical or statistical data	38	
Create mathematical or statistical diagrams or charts	43	
Develop or maintain databases	30	
Develop tables depicting data	33	
Explain complex mathematical information	30	
Prepare reports	8	
Resolve engineering or science problems	46	
Use computers to enter, access or retrieve data	3	
Use interpersonal communication techniques	10	
Use knowledge of investigation techniques	16	

Use mathematical or statistical methods to identify or analyze problems	30
Use oral or written communication techniques	1
Use quantitative research methods	35
Use relational database software	26
Use scientific research methodology	21
Use spreadsheet software	18

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: n/a

Focus Occupation: Mathematicians (15-2021)
Associated Occupation: Mathematical Technicians (15-2091)

Tools and Technologies

Exclusivity

Tools and technology data is unavailable for one or both occupations.

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.